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10/582,489

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Isao Kitazawa

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FOLEY AND LARDNER LLP

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

KAYES, SEAN PHILLIP

ART UNIT

PAPER NUMBER

2833

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



# Office Action Summary

**Application No.**

10/582,489

**Applicant(s)**

KITAZAWA ET AL.

**Examiner**

SEAN KAYES

**Art Unit**

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_



### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/3/2009 has been entered.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3 and 5-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Claim 1 recites "a controlling unit" ... "for driving the step motor to be open in the non-hand-driven state, except for a time period before and/or after the driving pulse is output." This limitation is not supported by the original disclosure.
4. See page 19 lines 4-28. The disclosure of the invention discusses a non-open signal line pertaining to before and after the driving pulse, i.e. T2, figure 5. The



disclosure, however, defines this interval as constituting a portion of the "hand-driven state." Note T2, figure 5 and the discussion on page 19. The disclosure of the invention sets forth a closed period before **and** after the driving pulse. It is not seen from where the claim term "or" draws its support. For instance as noted in the discussion of page 19, if the signal is left open before the driving pulse the hand and motor will be in an unstable position.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-3 and 5-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The meaning of the phrase "to control a signal line of the driving unit for driving the step motor to be open in the non-hand-driven state" is not understood. Paragraphs 87-88, and 90 refers to the term "open" as pertaining to the region of the dotted lines in figure 5. Figure 5 depicts a plurality of signals. A unified theme setting forth a proper definition of the term "open" according to the appropriate regions is not therein set forth. Applicant states that the claim language in question is not disclosed or suggest by Nakajima. This assertion confuses the matter. If the claim language (currently at issue) means that the motor is controlled to be OFF than the motor would necessarily be in a non-hand-driven state, as per the claim language. This raises the question, how could any motor driving a hand ever not meet the limitation of being controlled to be



OPEN/OFF when in a non-hand-driven state? If the motor is OFF, than it is not driven and vice versa.

8. Claim 1 recites "in the non-hand-driven state, except for a time period before and/or after the driving pulse is output. This recitation is indefinite. A time period before and/or after the driving pulse in the context of a non-hand driven state defines all the time frame for operation. The time frame associated with the exception is so broad as to negate the necessity of the previous limitation. As recited the time period before and after the driving pulse could encompass the entire non-hand-driven state.
9. Claims 2-3 and 5-19 depend from claim 1.

### ***Specification***

10. The disclosure is objected to because of the following informalities:
11. Paragraph 11, page 4, references a cancelled claim. As claim numbers may further be changed at allowance, the specification should not refer to any claim numbers.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



13. Claims 1, 3, and 6-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima (US 4404510).

14. With respect to claim 1 Nakajima discloses an analog electronic timepiece comprising:

- a clock signal supplying unit (8 figure 2) configured to generate and supply a reference signal for clocking;
- an amplifying unit (24 figure 3) configured to amplify a counter electromotive force generated by a step motor that drives hand motions of time hands;
- an impact detecting unit (13 and 14 figure 2) configured to detect an impact applied externally based on an output signal level of the amplifying unit; and
- a controlling unit (10, 11, and 14 figure 2) configured to control to drive the step motor using an intermittent driving pulse based on the reference signal supplied from the clock signal supplying unit when the time hands are in a hand-driven state, and to control to brake the step motor when an impact is detected by the impact detecting unit while the time hands are in a non-hand-driven state, wherein
- the controlling unit is configured to control a signal line of the driving unit for driving the step motor to be open in the non-hand-driven state (column 2 line 40 through column 3 line 18; column 5 lines 57-68; see open period interval t1 figure 4 before the closed period t2 before the driving pulse signal), except for a time period before and/or after the driving pulse is output (t2 figure 4; column 3 lines



7-9, the shock detection is operable "except several millisecond after the supply of the driving signal has been stopped").

15. With respect to claim 10 Nakajima teaches stable terms respectively for starting the rotor of the pulse motor from a stationary stable point thereof before outputting the driving pulse, and for returning the rotor of the pulse motor to the stationary stable point thereof after outputting the driving pulse. Note the time period t2 and the tailing closed after portion of signal sigma 10 figure 4. The signal has close signal portions to maintain a stable rotor position similar to applicant's disclosed "closed" states figure 5. See t2 figure 5 of applicant's disclosure.

16. It is noted that the patentability of claims 3, 6-9 and 11-18 has not been separately argued.

#### ***Allowable Subject Matter***

Claims 2, 5 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

17. Applicant's arguments filed 4/3/2009 have been fully considered but they are not persuasive.



18. Applicant asserts that the term OPEN is definite. Applicant further asserts that signals AA and BB are either in an H state or an open state according to figure 5 and page 3. This argument is not persuasive. Applicant appears to be misinterpreting the rejection. The emphasis on the term "open" is not proper. Rather the phrase "open in the non-hand-driven state" is more representative of the ambiguity than the word "open" is alone. The ambiguity of the term open is of consideration with regard to how it is interpreted to be in a non-hand driven state. Applicant appears to mean a driving pulse period or equivalent wherein the term "non-hand-driven state" is recited. However, this interpretation would not be consistent with the state of the art. Note Nakajima column 2 line 40 through column 3 line 18 which discussing switching from open to close rapidly. When the driving signal is closed it is applying a force to the motor, i.e. driving it. When the signal is open the motor is not being driven. This not driving CAN be interpreted as being a portion of a complete driving signal. However, according to applicant's disclosure the scope of the phrase "open in the non-hand-driven state" cannot be ascertained. Applicant has not provided a basis or clear discussion of what constitutes this state nor what does not constitute this state. This lack of clarity in turn draws the meaning of the term "open" into question, particularly wherein the terms "H" and "L" are discussed in detail absent a discussion of the terms open and closed.

19. Signal BB is shown in figure 5 as having two states "H" and "L". According to the disclosure "the signal lines are activated to [H] for the terms depicted by solid lines FIG. 5 and are OPEN for the terms depicted by dotted lines." In the figure, however, both signals AA and BB are maintained in an H state for both the dotted and solid line



regions of the non-hand driven state. There are different dotted line regions. There are vaguely illustrated dotted regions of the horizontal lines as well as two regions t1 and t2 enclosed by dotted lines. In both types of dotted lines the state is explicitly depicted as being an "H" state with at least regard to the BB signal. Accordingly one having ordinary skill in the art would not recognize a definitive scope for the term OPEN. One having ordinary skill in the art would not understand the term "OPEN" to refer to not "H" state as asserted by applicant.

20. Applicant asserts, in regard to the 112 rejection, that the term "OPEN" is commonly used in the field of clock motor control, such as is described in US 6262554. This argument is not persuasive. Common usage is not the same thing as a definitive scope. The citation of US 6262554 (hereafter referred to as '554) is very illustrative of the point in question. In '554 the scope and meaning of the term open and closed is discussed several times to make clear in the intended scope and meaning. Note for instance step 84 figure 3 and the corresponding discussion column 9 lines 35-44. In this citation the author does not reference the term "open" as though the meaning is clearly understood absent any other disclosure. To the contrary the author clarifies "is opened so that no electromagnetic braking force is generated by the driving coil 11." In this reference the meaning and scope of the term "open" and "closed" are frequently discussed and contrasted to define a definitive scope for their use in independent claim 1. This disclosure does not, however, set forth a clear definition in the field of endeavor as could be applied to the current case. It is not clear how one having ordinary skill in



the art would find a detecting coil controlled to be in an open state to be synonymous to applicant's claimed scope of driving a step motor to be open in the non-hand driven state.

21. Applicant asserts that Nakajima's signals phi 8 and 9 are high during a non-hand-driven state i.e. during the periods other than t1 and t2. This argument is not persuasive. As previously stated the non hand driven state is not well defined. Applicant's characterization that t1 and t2 are constitute the driven state is confusing. For instance the pulse period following t1 and t2 appears to correspond to applicant's driving signal (see S20 and S21 figure 5) during the hand driven state. What does applicant mean the hand driven state and non hand driven state? In Nakajima following t1 and t2 the signal is pulsed between open and closed – figure 4. See also at least column 2 line 40 through column 3 line 18 in Nakajima. Why would this open state not constitute an open state of Nakajima according to applicant's characterization of the driving state?

22. Applicant asserts that open does not mean that the signal is high state or low state; rather it means the signal line is in a high impedance state, which is neither a high state or a low state. This argument is not persuasive. Where does the disclosure of the invention state this assertion? Why than do the figures depict the "open" (dotted) state exclusively in an "H" state? One having ordinary skill in the art would not readily understand this intended meaning in light of the disclosure of the invention.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN KAYES whose telephone number is (571) 272-8931. The examiner can normally be reached on 11:00am to 9:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7/30/2009

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